

## 2018-2019 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2018-2019 academic year, including the Summer Semester 2018, the Fall Semester 2018 and the Winter Semester 2019.

For your convenience the Undergraduate Calendar is available in PDF format.

If you wish to link to the Undergraduate Calendar please refer to the Linking Guidelines.

The University is a full member of:

- Universities Canada

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# Disclaimer

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## University of Guelph 2018

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The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2018-2019 academic year, including the Summer Semester 2018, the Fall Semester 2018 and the Winter Semester 2019.

The University reserves the right to change without notice any information contained in this calendar, including fees, any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs. The publication of information in this calendar does not bind the University to the provision of courses, programs, schedules of studies, or facilities as listed herein.

The University will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by faculty, staff or students of the University or by others, civil unrest or disobedience, public health emergencies, or any other cause of any kind beyond the reasonable control of the University.

In the event of a discrepancy between a print version (downloaded) and the Web version, the Web version will apply.

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# Introduction

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## Collection, Use and Disclosure of Personal Information

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Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes. Certain personal information is disclosed to external agencies, including the Ontario Universities Application Centre, the Ministry of Advanced Education and Skills Development, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrarial Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrarial Services at the University at (519) 824-4120 or see <http://www.uoguelph.ca/registrar/registrar/index.cfm?index>.

## Disclosure of Personal Information to the Ontario Ministry of Advanced Education and Skills Development

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The University of Guelph is required to disclose personal information such as characteristics and educational outcomes to the Minister of Advanced Education and Skills Development under s. 15 of the Ministry of Advanced Education and Skills Development Act, R.S.O. 1990, Chapter M.19, as amended. The Ministry collects this data for purposes including but not limited to planning, allocating and administering public funding to colleges, universities and other post-secondary educational and training institutions.

Amendments made to the Ministry of Advanced Education and Skills Development Act, authorizing the collection and use of personal information from colleges and universities by the Minister of Advanced Education and Skills Development, which were set out in Schedule 5 of the Childcare Modernization Act, 2014, came into force on March 31, 2015.

The amendments strengthen the ability of the Minister to directly or indirectly collect and use personal information about students as required to conduct research and analysis, including longitudinal studies, and statistical activities conducted by or on behalf of the Ministry for purposes that relate to post-secondary education and training, including,

- i. understanding the transition of students from secondary school to post-secondary education and training,
- ii. understanding student participation and progress, mobility and learning and employment outcomes,
- iii. understanding linkages among universities, colleges, secondary schools and other educational and training institutions prescribed by regulation,
- iv. understanding trends in post-secondary education or training program choices made by students,
- v. understanding sources and patterns of student financial resources, including financial assistance and supports provided by government and post-secondary educational and training institutions,
- vi. planning to enhance the affordability and accessibility of post-secondary education and training and the quality and effectiveness of the post-secondary sector,
- vii. identifying conditions or barriers that inhibit student participation, progress, completion and transition to employment or future post-secondary educational or training opportunities, and
- viii. developing key performance indicators.

Information that the University is required to provide includes but is not limited to: first, middle and last name, Ontario Educational Number, citizenship, date of birth, gender, first three digits of a student's postal code, mother tongue, degree program and major(s) in which the student is enrolled, year of study and whether the student has transferred from another institution.

Further information on the collection and use of student-level enrolment-related data can be obtained from the Ministry of Advanced Education and Skills Development website: <https://www.ontario.ca/page/ministry-advanced-education-and-skills-development> (English) or <https://www.ontario.ca/fr/page/ministere-de-lenseignement-superieur-et-de-la-formation-professionnelle> (French) or by writing to the Director, Postsecondary Finance and Information Management Branch, Postsecondary Education Division, 7th Floor, Mowat Block, 900 Bay Street, Toronto, ON M7A 1L2.

An update on Institutional and Ministry of Advanced Education and Skills Development Act Notice of Disclosure Activities is posted at <https://www.ontario.ca/page/ministry-advanced-education-and-skills-development>

Frequently Asked Questions related to the Ministry's enrolment and OEN data activities are also posted at: <http://www.tcu.gov.on.ca/peps/publications/NoticeOfCollection.pdf>

### Authority to Disclose Personal Information to Statistics Canada

The Ministry of Advanced Education and Skills Development discloses student-level enrolment-related data it collects from the colleges and universities as required by Statistics Canada in accordance with Section 13 of the Federal Statistics Act. This gives Ministry of Advanced Education and Skills Development Act authority to disclose personal information in accordance with s. 42(1) (e) of FIPPA

## Notification of Disclosure of Personal Information to Statistics Canada

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For further information, please see the Statistics Canada's web site at <http://www.statcan.ca> and Section XIV Statistics Canada.

## Address for University Communication

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Depending on the nature and timing of the communication, the University may use one of these addresses to communicate with students. Students are, therefore, responsible for checking all of the following on a regular basis:

### Email Address

The University issued email address is considered an official means of communication with the student and will be used for correspondence from the University. Students are responsible for monitoring their University-issued email account regularly. See Section I--Statement of Students' Academic Responsibilities for more information.

### Home Address

Students are responsible for maintaining a current mailing address with the University. Address changes can be made, in writing, through Enrolment Services.

## Name Changes

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The University of Guelph is committed to the integrity of its student records, therefore, each student is required to provide either on application for admission or on personal data forms required for registration, his/her complete, legal name. Any requests to change a name, by means of alteration, deletion, substitution or addition, must be accompanied by appropriate supporting documentation.

## Student Confidentiality and Release of Student Information Policy Excerpt

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The University undertakes to protect the privacy of each student and the confidentiality of his or her record. To this end the University shall refuse to disclose personal information to any person other than the individual to whom the information relates where disclosure would constitute an unjustified invasion of the personal privacy of that person or of any other individual. All members of the University community must respect the confidential nature of the student information which they acquire in the course of their work.

Complete policy at <https://uoguelph.civicweb.net/document/68892/ORSInfoReleasePolicy060610.pdf?handle=FF982F8A9AEA4076BE4F3D88147172B8>.

# Learning Outcomes

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On December 5, 2012, the University of Guelph Senate approved five University-wide Learning Outcomes as the basis from which to guide the development of undergraduate degree programs, specializations and courses:

1. Critical and Creative Thinking
2. Literacy
3. Global Understanding
4. Communicating
5. Professional and Ethical Behaviour

These learning outcomes are also intended to serve as a framework through which our educational expectations are clear to students and the broader public; and to inform the process of outcomes assessment through the quality assurance process (regular reviews) of programs and departments.

An on-line guide to the learning outcomes, links to the associated skills, and detailed rubrics designed to support the development and assessment of additional program and discipline-specific outcomes, are available for reference on the [Learning Outcomes website](#).

## 1. Critical and Creative Thinking

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Critical and creative thinking is a concept in which one applies logical principles, after much inquiry and analysis, to solve problems with a high degree of innovation, divergent thinking and risk taking. Those mastering this outcome show evidence of integrating knowledge and applying this knowledge across disciplinary boundaries. Depth and breadth of understanding of disciplines is essential to this outcome.

In addition, **Critical and Creative Thinking** includes, but is not limited to, the following outcomes: **Inquiry and Analysis; Problem Solving; Creativity; and Depth and Breadth of Understanding.**

## 2. Literacy

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Literacy is the ability to extract information from a variety of resources, assess the quality and validity of the material, and use it to discover new knowledge. The comfort in using quantitative literacy also exists in this definition, as does using technology effectively and developing visual literacy.

In addition, **Literacy** includes, but is not limited to, the following outcomes: **Information Literacy, Quantitative Literacy, Technological Literacy, and Visual Literacy.**

## 3. Global Understanding:

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Global understanding encompasses the knowledge of cultural similarities and differences, the context (historical, geographical, political and environmental) from which these arise, and how they are manifest in modern society. Global understanding is exercised as civic engagement, intercultural competence and the ability to understand an academic discipline outside of the domestic context.

In addition, **Global Understanding** includes, but is not limited to, the following outcomes: **Global Understanding, Sense of Historical Development, Civic Knowledge and Engagement, and Intercultural Competence.**

## 4. Communicating

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Communicating is the ability to interact effectively with a variety of individuals and groups, and convey information successfully in a variety of formats including oral and written communication. Communicating also comprises attentiveness and listening, as well as reading comprehension. It includes the ability to communicate and synthesize information, arguments, and analyses accurately and reliably.

In addition, **Communicating** includes, but is not limited to, the following outcomes: **Oral Communication, Written Communication, Reading Comprehension, and Integrative Communication.**

## 5. Professional and Ethical Behaviour

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Professional and ethical behaviour requires the ability to accomplish the tasks at hand with proficient skills in teamwork and leadership, while remembering ethical reasoning behind all decisions. The ability for organizational and time management skills is essential in bringing together all aspects of managing self and others. Academic integrity is central to mastery in this outcome.

In addition, **Professional and Ethical Behaviour** includes, but is not limited to, the following outcomes: **Teamwork, Ethical Reasoning, Leadership, and Personal Organization and Time Management**

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## Specializations and Their Degrees

Specializations and the Degree under which they are offered.

Specialization Name	Specialization Acronym	Honours Program Major	Honours Program Minor	Honours Program Area of Emphasis	General Program	Co-op Program
Accounting	ACCT	BCOMM				BCOMM
Adult Development	ADEV	BASC				BASC
Agriculture	AGR		BSAG BAS			
Agricultural Science	AGRS	BSAG				
Animal Biology	ABIO	BSC				
Animal Science	ANSC	BSAG				
Anthropology	ANTH	BA	BA BAS		BA	
Applied Human Nutrition	AHN	BASC				
Applied Plant Science	APSC			BSCH.PLSC		
Art History	ARTH	BA	BA BAS			
Arts, Culture and Heritage Management	ACHM		BA			
Biochemistry	BIOC	BSC	BSC BAS			BSC
Biodiversity	BIOD	BSC				
Bioinformatics	BINF			BSCH:MSCI		
Biological & Medical Physics	BMPH	BSC				BSC
Biological and Pharmaceutical Chemistry	BPCH	BSC				BSC
Biological Engineering	BIOE	BENG				BENG
Biological Science	BIOS	BSC			BSC	
Biology	BIOL		BSC BAS			
Biomathematical or Biostatistical Modelling	BBM			BSCH:MSCI		
Bio-Medical Science	BIOM	BSC				
Biomedical Engineering	BME	BENG				BENG
Biomedical Toxicology	BTOX	BSC				BSC
Biotechnology	BIOT		BSC BAS			
Botany	BOT			BSCH.PLSC		
Business	BUS		BA			
Business Economics	BECN		BA BSC BAS			
Chemical Physics	CHPY	BSC				BSC
Chemistry	CHEM	BSC	BSC BAS			BSC
Child, Youth and Family	CYF	BASC				BASC
Classical Studies	CLAS	BA	BA BAS			
Computer Engineering	CENG	BENG				BENG
Computer Science	CS	BCOMP		BA BSCH:MSCI		BCOMP
Computing					BCOMP	
Computing & Information Science	CIS		BA BSC BAS			
Creative Writing	CW		BA			
Criminal Justice & Public Policy	CJPP	BA	BA BAS			
Crop, Horticulture and Turfgrass Sciences	CHAT	BSAG				
Ecology	ECOL	BSES	BSC BAS			BSES
Economic & Business Development	EBD			BAH.ID		

Specialization Name	Specialization Acronym	Honours Program Major	Honours Program Minor	Honours Program Area of Emphasis	General Program	Co-op Program
Economics	ECON	BA	BA BAS	BA BSCH:MSCI		BA
Electricity & Systems	EAS			BSCH:MSCI		
Energy & Mass Transfer	EMT			BSCH:MSCI		
Engineering Systems & Computing	ESC	BENG				BENG
English	ENGL	BA	BA BAS		BA	
Environmental Biology	ENVB	BSC				
Environment & Development	EAD			BAH.ID		
Environmental Economics & Policy	EEP	BSES				
Environmental Engineering	ENVE	BENG	BENG			BENG
Environmental Geoscience & Geomatics	EGG	BSC				
Environmental Governance	EGOV	BA				
Environmental Management	EM	BBRM				
Environment and Resource Management	ERM	BSES				BSES
Environmental Sciences	ENVS	BSES				BSES
Equine Management	EQM	BBRM				
European Culture & Civilization	ECC		BA BAS	BAH.EURS		
European Business Studies	EBS			BAH.EURS		
European Studies	EURS	BA				
Family & Child Studies	FCS		BA BAS			
Finance	FIN			BCOMM.MEF		
Food and Agricultural Business	FAB	BCOMM				BCOMM
Food, Agricultural and Resource Economics	FARE	BA				
Food Engineering	FENG		BENG			
Food Industry Management	FIM	BBRM				BBRM
Food Science	FOOD	BSC				BSC
French Studies	FREN	BA	BA BAS		BA	
Gender and Development	GAD			BAH.ID		
GIS & Environmental Analysis	GIS		BSC BAS			
Geography	GEOG	BA	BA BAS		BA	
German	GERM		BA BAS			
Historical Perspectives in Development	HPD			BAH.ID		
History	HIST	BA	BA BAS		BA	
Hospitality and Tourism Management	HTM	BCOMM				BCOMM
Human Kinetics	HK	BSC				
Individual Studies	IS	BA				
Individualized	IN			BA BSCH:MSCI		
International Development	ID	BA	BA BAS		BA	
Italian	ITAL		BA BAS			
Landscape Architecture		BLA				
Latin American Studies	LAS			BAH.ID		
Leadership and Organizational Management	LOM	BCOMM				
Marine & Freshwater Biology	MFB	BSC				BSC
Management Economics & Finance	MEF	BCOMM				BCOMM
Marketing Management	MKMN	BCOMM				BCOMM



Specialization Name	Specialization Acronym	Honours Program Major	Honours Program Minor	Honours Program Area of Emphasis	General Program	Co-op Program
Marketing	MKTG		BA BAS			
Mathematical Economics	MAEC	BA				BA
Mathematical Science	MSCI	BA BSC	BSC BAS	BA		
Mathematics	MATH		BA BSC BAS		BA	
Media & Cinema Studies	MCST		BA			
Microbiology	MICR	BSC	BAS BSC			BSC
Mechanical Engineering	MECH	BENG				BENG
Molecular Biology & Genetics	MBG	BSC	BSC BAS			
Museum Studies	MS		BA BAS			
Music	MUSC	BA	BA BAS		BA	
Nanoscience	NANO	BSC				BSC
Neuroscience	NEUR	BSC	BSC BAS			
Nutritional & Nutraceutical Sciences	NANS	BSC	BSC BAS			
Philosophy	PHIL	BA	BA BAS		BA	
Physical Science	PSCI	BSC			BSC	
Physics	PHYS	BSC	BSC BAS			BSC
Plant Biotechnology	PBTC			BSCH.PLSC		
Plant Environmental Science	PESC			BSCH.PLSC		
Plant Science	PLSC	BSC	BSC BAS			
Political Economy & Administrative Change	PEAC			BAH.ID		
Political Science	POLS	BA	BA BAS		BA	
Psychology	PSYC	BA	BA BAS		BA	BA
Public Management	PMGT	BCOMM				BCOMM
Real Estate & Housing	REH	BCOMM				BCOMM
Rural & Agricultural Development	RAD			BAH.ID		
Signal Processing	SP			BSCH:MSCI		
Sociology	SOC	BA	BA BAS		BA	
Spanish and Hispanic Studies	SPAH	BA	BA BAS		BA	
Software Engineering	SENG	BCOMP				BCOMP
Statistics	STAT		BA BSC BAS	BA	BA	
Studio Art	SART	BA	BA			
Theatre Studies	THST	BA	BA BAS		BA	
Theoretical Physics	THPY	BSC				
Veterinary Medicine		DVM				
Water Resources Engineering	WRE	BENG				BENG
Wildlife Biology & Conservation	WBC	BSC				
Zoology	ZOO	BSC	BSC BAS			